



DESIGNING AUTHENTIC LEARNING ACTIVITIES AND ENVIRONMENTS: THEORY AND PRACTICE

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Adult learners returning to school, whether face-to-face or at a distance, are looking for educational experiences that not only cover the theory and background of a field, but also connect the program to the real world of work (Knowles, 1984). Whether they are looking for career change, advancement in their current organization, or personal growth opportunities, they are demanding that their educational experiences move them beyond the traditional decontextualized classroom model. These types of learning activities are embodied in the concept of “practice fields” wherein “the goal shifts from the teaching of concepts to engaging the learner in authentic tasks that are likely to require the use of those concepts or skills” (Barab & Duffy, p.34).

For those of us involved in distance education, this can provide unique opportunities to leverage educational technologies as our students are dispersed across a country or around the world. In this proposed presentation, we will discuss various instructional strategies used in courses offered by Penn State’s fully online World Campus¹ toward the end of creating authentic learning activities and environments.

Practice Fields and Authentic Learning

The hallmark of a constructivist learning environment is that students are actively engaged in their learning rather than passive recipients of content (Jonassen, 1999). In authentic learning contexts, students are encouraged to engage in realistic, ill-structured problems that more closely resemble the real world scenarios they will encounter outside the structured class. Whenever possible, engagement with communities outside of the formal academic environment is even more effective (Barab & Duffy, 2012).

The authenticity of instructional experiences can vary from simulations, to immersive virtual experiences, to presentations to companies through technology or program internships. Barab and Duffy (2012) summarize the principles articulated over the years for designing “practice fields.” Practice fields are environments characterized by the following:

¹ World Campus is the Pennsylvania State University’s online campus, serving over 13,000 individual adult students at a distance. World Campus offers 90 distinct certificates, minors, bachelor’s degrees, and master’s degree programs online.

- “*Doing domain-related practices*. Learners must be actively doing domain-related practices, not listening to the experiences or findings of others as summarized in texts or by teachers.”
- “*Ownership of the inquiry*. The students must be given and must assume ownership of the dilemma and the development of a resolution.”
- “*Coaching and modelling of thinking skills*. The teacher's role is not solely that of a content expert, but rather as a learning and problem-solving expert.”
- “*Opportunity for reflection*. Too often when we are engaged in work we simply do not have the opportunity to reflect on what we are doing, are going to do, or what we have done.”
- “*Dilemmas are ill-structured*. The dilemmas in which learners are engaged must either be ill-defined or defined loosely enough so that students can impose their own problem frames (Roth, 1996; Savery & Duffy, 1996).”
- “*Support the learner rather than simplify the dilemma*. The dilemma the students encounter should reflect the complexity of the thinking and work they are expected to be able to do outside of the school context when this learning is completed.”
- “*Work is collaborative and social*. Meaning is a process of continual negotiation. The quality and depth of this negotiation and understanding can only be determined in a social environment.” (pp.36-37)

Over the years, Penn State’s World Campus Learning Design unit has worked to incorporate the above design strategies targeting adult learners in a variety of ways. In what follows we will highlight and discuss four individual case examples in which we have designed practice fields into our online courses in order to provide students with authentic learning activities and environments. Our examples span the continuum from relatively low cost, low tech activities to highly immersive complex virtual environments.

Design Strategy Examples for Authentic Practice Fields

Case 1: Strategic Communication

The Strategic Communications program at Penn State is a program in which students, usually working adults, are trained to be better strategic communication practitioners. While it includes theoretical frameworks and a goal is to teach students to reflect more deeply on their field, much of the courses are designed to scaffold learners to be able to function as practitioners. Our students typically either hold or hope to attain positions like the following: public relations manager; marketing manager; media or communication worker; advertising or promotions manager; and broadcast journalist or news writer.

Many of the activities throughout the courses in the program – both in terms of content and assessment – are intended to represent authentic real-world scenarios practitioners would encounter in those positions. We will briefly discuss two course examples. In the first course, News Writing, students are expected to engage in their communities as a media professional, broadcast journalist, or news writer would. Students are required to identify a real

organization with which they will work to write press releases and news stories about events actually occurring within that organization. The students engage in peer feedback activities where they pitch ideas, review drafts, and discuss ethical issues. These conversations are held in a social media platform.

In the second course, Research Methods for Strategic Communicators, the students work independently in their own communities to contribute to a shared dataset, using the tools and methods taught in the course, to test an actual hypothesis. The research concepts are presented in the context of a company that is promoting a fundraising event. The employee in charge of the event has to research why ticket sales are down and what he or she needs to do to increase sales. As the students are presented with the various research activities (interviewing, surveys, focus groups) in the course, they use those tools to build the shared dataset that is then evaluated to test the research hypothesis.

The practice fields designed in the Strategic Communications program are relatively low cost, low tech, and fairly straightforward in terms of design logistics. They require students to participate in domain-related practices, reflect on their work, confront ill-structured problems, and work in a collaborative and social environment (Barab & Duffy, 2012, pp.36-37).

Case 2: Instructional Design in Distance Education

Instructional Design in Distance Education is a course that not only introduces students to key design factors when developing curriculum for distance education, but also asks the students take these concepts and integrate them into prototypical distance education lessons. The students, as small teams, pick one of four real world examples and are tasked with defining the audience, determining existing knowledge, producing prototype budgets, a prototype lesson, and presenting the work as a report to what would be a committee that has put the project out to bid. Thus, the students need to bring all the elements of the course together to develop the final product not unlike what they will experience if working for a training company or bidding on an education contract.

This particular approach to an authentic learning experience is one that is not costly to implement, but one where the students have indicated that, while it has been one of the more challenging assignments in the program, it has made them stretch and tackle aspects of design they have not had to deal with previously (e.g. budgets). It has made them think more deeply about the audience they are addressing in their designs and how the technology choices may impact the learners in terms of costs and access. As most of the students in the course are not instructional designers or involved in distance education it allows them to build skills that they can integrate into their current careers or new careers as designers.

The following is the rubric used to analyze the final product and the next screen shot is from one of the team submissions. The actual team product will be demonstrated during the presentation.

Prototype Unit or Lesson = 25 pts		Final Report = 25 pts		Peer Evaluation = 5 pts	
Well-Written Learning Objectives	4 pts	Well Written	3 pts	Peer Evaluation	5 pts
Assessment Strategy	4 pts	Well-Written Learning Objectives	3 pts		
Grading Outline	2 pts	Course Outline	3 pts		
Interaction Strategy	4 pts	Able to Defend Decisions	3 pts		
Content	4 pts	Correct Design for Audience	2 pts		
Multimedia (if appropriate)	3 pts	Project Follows QM Standards	1 pts		
Learning Activities (quizzes, group-work, etc.)	4 pts	Reasonable Timeframe for Review of Content & Completion of Activities	2 pts		
		Draft Proposal	4 pts		
		Draft Budget	4 pts		

Figure 8. Instructional Design Project - Grading Rubric

Figure 9. Instructional Design Project - Team Product Example

Case 3: Forensic Nursing Autopsy

The Forensic Evidence Collection and Preservation course examines the forensic nurse's role in recognizing injuries and patterns of injury. Evidence collection procedures are examined from collection to courtroom presentation. This course provides the students with the unique experience of watching videos of an actual autopsy being conducted on a cadaver. These videos were originally produced expressly for this course and our nursing students at a distance; however, because of the obstacles of viewing an autopsy in a synchronous, face-to-

face course – timing, limited space in the morgue, and family consent – the instructor is going to use these videos in the resident instruction class as well.

Prior to viewing the autopsy, the students watch a video in which the instructor coaches them through the affective aspect of the autopsy. She describes what they may feel, how they may react, and reminds them to be aware of their emotional state during the viewing of the autopsy videos. She cautions them that a forensic nurse must remain unbiased in order to collect the evidence to help determine the cause of death.

After viewing the videos, the students engage with one another in a discussion of what they learned and how it will affect their behaviour. In future iterations, the instructor will videotape a live review session with actual students that discuss their experience and reactions to the autopsy videos.

This example of a live autopsy is definitely on the expensive and logistically complex side of the continuum. There were a number of practical, legal, and privacy matters pertaining to obtaining a cadaver and actually filming an autopsy that came into play in designing this practice field activity for the nursing course. The benefits of this approach centre on domain-related activities in the scientific observation of an actual autopsy and the authenticity of the learning experience itself. In addition to analyzing the cause of death from a scientific perspective, students also discussed their real emotions pertaining to the situation. Practicing these cognitive skills and experiencing and reflecting on their affective responses prepare them much more than a textbook overview to move into real forensic settings as nurse practitioners.

The following is a screen shot highlighting the video sections of the autopsy. Due to legal reasons, only registered students in the course and the course instructor can actually view clips from the autopsy. In the presentation, we will discuss the student and instructor experiences with this activity as well as the design factors that went into this production.



Figure 10. Forensic Nursing Autopsy – Video Screen Shot

Case 4: Italian Language Learning

The Italian language learning environment has been designed intentionally to immerse students in real-world scenarios they are likely to encounter when travelling to Italy. Rather than students learning the language through artificially constructed textbook scenarios focused on the traditional-aged residential undergraduate student, they proceed through a story-driven, multimedia-rich course in which they are an active participant in their learning experience. Students virtually go to Italy as first time visitors and encounter and must navigate a number of scenarios adult travellers would face. Scenarios include negotiating transportation, attending cultural events, dining out, purchasing travel supplies, and meeting new people.

This example practice field was the most complex and expensive to develop as it involved a variety of design and production factors including language translation, the development of multiple authentic scenarios, hundreds of context-specific images captured in Italy, and multiple video recordings of different scene setters used throughout the course. The courses have not yet launched but based on two pilots with students are highly successful in terms of “the learning context [being] motivating” (Barab & Duffy, 2012, p.37).

The following are screen shots from the Italian language learning course.

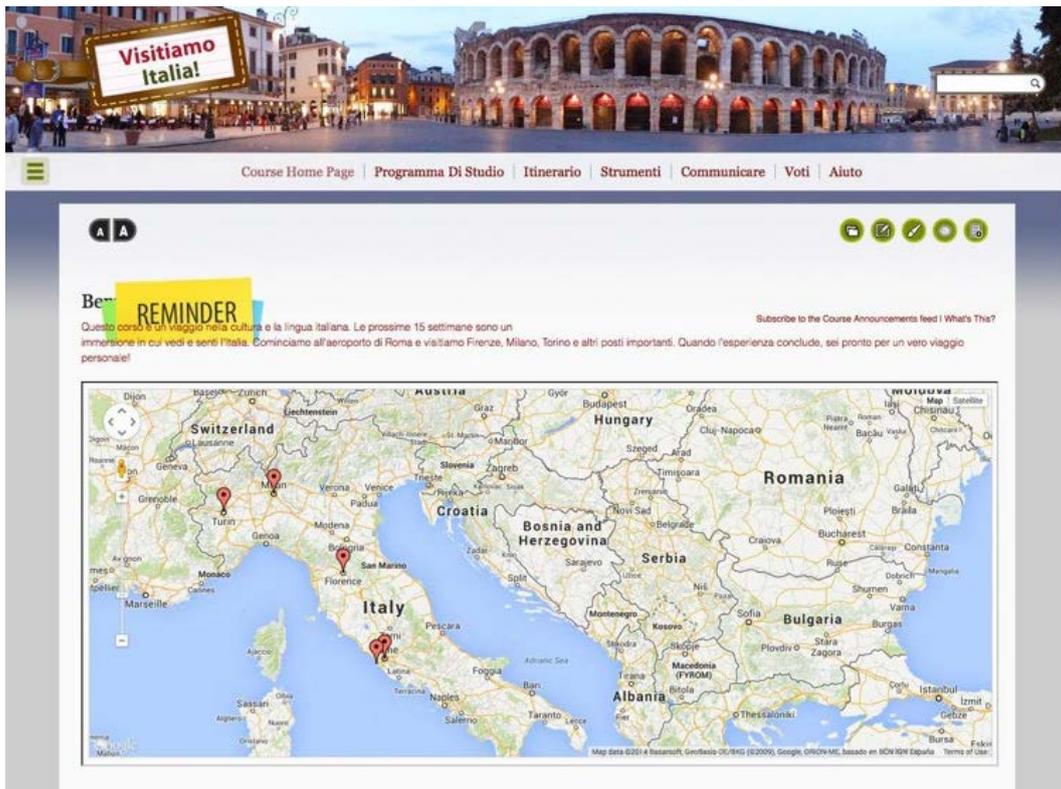


Figure 11. Italian Language Learning – Course Home Page Screen Shot



Figure 12. Italian Language Learning – Scene Setter Screen Shot



Figure 13. Italian Language Learning – Conversation Prompt Screen Shot

Discussion

The above examples all emphasize learning environments and activities in which students “practice the kinds of activities that they will encounter outside of school” (Barab & Duffy, 2012, p.34). Practice fields can vary in terms of cost, and overall complexity. Our examples range from low tech, low cost activities which ask students to engage directly in practices they will encounter in the workforce outside of the classroom to high tech, high cost learning environments meant to simulate or re-produce actual environments students will be immersed in the world outside of the classroom. Regardless of complexity and production cost, fundamental to the effective design and implementation of practice fields is a commitment to learning environments and activities that are authentic and treat the learner as an active participant in the learning process rather than a passive recipient of static knowledge.

References

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